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ABSTRACT

Human beings are a delicate balance of mind, body, and spirit, so an imbalance in one domain affects all others. The purpose of this paper is to examine the effects that physical fitness may have on such human characteristics as personality and behavior. A review of the literature reveals that physical fitness is related to, and can affect, several personality characteristics, such as self-concept, depression, anxiety, attention span, and locus of control. Implications for counselors are explored, as well as ideas for implementing a more holistic approach to counseling that includes the physical domain. Guidelines are proposed for counselors who introduce physical activity and exercise into their clients' therapeutic process, and suggestions are made for further research.
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Physical Fitness

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Physical Fitness and Counseling

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Running head: PHYSICAL FITNESS

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Abstract

Human beings are a delicate balance of mind, body, and spirit, so an imbalance in one domain affects all others. The purpose of this paper is to examine the effects that physical fitness may have on such human characteristics as personality and behavior. A review of the literature reveals that physical fitness is related to, and can effect, several personality characteristics, such as self-concept, depression, anxiety, attention span, and locus of control. Implications for counselors are explored, as well as ideas for implementing a more holistic approach that includes the physical domain.

Physical Fitness

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"...I observe this body I live in and see that
it is lean and strong,
the eyes are clear, the skin glows.
the running is obviously a wonderful tonic
for this body.
and what is good for the body
is good for the man.
our spirit is not separate from our body
any more than the water is separate from the
stream."

(Rohe, 1974, The Zen of Running.)

Five years ago, I discovered running. Five years ago, I discovered myself: who I am as a healthy, emotional, creative, and spiritual being. Running was a vehicle to combat stress, anxiety, and depression. I ran because physically, emotionally, and spiritually, I knew it was "working," although intellectually, I was unaware of the effects of physical exercise. I was enthusiastic, passionate, and lively again, as if my disjointed parts reunited. I had discovered a source of renewed energy. I felt replenished, freer, and relaxed. Once again,

I felt whole.

I still run. Perhaps I could be considered a runner, although I do not think of myself as such. I prefer to think of myself as one who has benefited from physical fitness in enough ways that it has become part of my lifestyle. Because of this experience, I have often wondered about the mind/body connection. How does the physical realm have the power to heal? In what way does physical fitness affect us emotionally, intellectually, and spiritually? Since the physical domain served as the source of my well-being, how can I take my experience, combine it with sound knowledge, and incorporate it into my counseling style? Hence the dilemma which sent me on my quest.

Philosophers since the time of Plato and Aristotle have recognized that the body can affect the mind (Hinkle & Tuckman, 1988). Today, however, Western thinkers divide humans into body, mind and spirit (Carlson & Ardell, 1981), failing to view the person as a culmination of physical, psychological, social, emotional, and environmental processes. This philosophy is apparent on our professions: physicians treat the body, counselors and psychologists focus on the mind, and clergy attend

to the spirit. Conversely, the holistic model of health views the person as a total process or being. It does not support the dualistic approach which separates mind from body.

The word "holistic" was coined by Jan C. Smuts from the Greek word "holos", meaning whole, in the sense that a living entity is greater than the sum of its parts (Gross, 1980). Holistic implies an interdependent system, whereby a change in one part constitutes a change in all others, so that our physical functioning effects our overall well-being.

Human beings are created with a natural urge for physical activity (Croce & Lavay, 1985). Physiologically, the benefits of exercise are numerous. Some of the proven benefits include: strengthening of the heart, increased resistance to illness, improved muscle tone and strength, strengthening and development of blood pressure, and a decrease in insomnia (Carlson & Ardell, 1981). The benefits, however, are not restricted to the physical domain. The relationship between physical activity, and emotional and behavioral characteristics, has also been the focus of research. The paper will explain how physical fitness has had an impact on: self-concept,

body image, attention span, depression, stress and anxiety, and an overall feeling of well-being. Using a holistic model, it seems likely that an improvement in physical functioning would result in an improvement in overall functioning. The purpose of this review of the literature, then, is to review studies examining the effects physical fitness may or may not have on certain personality and behavioral characteristics. Based on this premise, the following review was conducted.

Review of the Literature

Background

The review was conducted to study psychological benefits of physical fitness. Although the majority of studies in the review focus on running as the means to achieve physical fitness, fitness can refer to a level of physical activity at which a person experiences an active rather than sedentary life-style (Gross, 1980).

Even though the literature search did not provide any clear-cut classification system for psychological variables, it appears that they fall into two broad categories: emotional and behavioral characteristics. Emotional characteristics studied in this review, include

self-concept, stress, anxiety and depression. Behavioral characteristics include locus of control and attention span. While an effort was made to report on variables in a singular manner, overlap occurs as researchers frequently study more than one variable simultaneously. In order for the review to be as complete as possible and more applicable to counseling of all ages, studies with children, adolescents, and adults were included.

Emotional Effects

Vigorous physical activity is believed to have a cathartic or cleansing effect on the body by providing an outlet for emotions (Silvestri, 1987). Certain forms of exercise have been found to decrease anxiety and depression, while increasing self-confidence and self-esteem (Carlson & Ardell, 1981). Overall, researchers have concluded that the very physically fit person tends to be more emotionally stable than his or her inactive counterpart (Ismail & Trachtman, 1973).

Self-concept. Numerous studies have investigated the effect physical fitness may or may not have on self-concept. Percy, Dziuban, and Martin (1981) conducted a study to analyze the effects of distance running, i.e., one to three miles, with fifth and sixth graders.

Using the Coopersmith Self-Esteem Inventory, they found the seven weeks of running to have a positive impact on self-concept. A pioneer running program initiated by Bradfield, Cannon, Parker and Lualhati (1981), in which an entire school of 450 students participated in daily runs, resulted in improved physical health, an increase in self-esteem, and a decrease in behavior problems, as observed by teachers and staff.

McGowan, Jarman and Pedersen (1974) studied the effects of an endurance training program on adolescents' self-concept. Thirty-seven seventh-grade males with low self-esteem were assigned to either the experimental or control group. The experimental group participated in an 18-week running program. A significant increase occurred in self-concept from pretest to posttest for the experimental group. Another study with 30 adolescent male offenders concluded that physical training, a combination strength and running program, appeared to elevate low self-esteem, reduce anxiety and depression, and in general, promoted a healthier psychological state (Hilyer et al., 1982).

Miller (1979) began a jogging program with "disruptive, reluctant, nonverbal 10-to-13-year-olds" (p.166) in

an inner city school. The running program resulted in a decrease of disruptive behavior, and an increase in self-esteem. Hilyer and Michell (1979), in studying adolescent girls, concluded that exercise improved self-concept and overall sense of well-being.

Finally, Collingwood (1972) measured self-concept and self-acceptance of male rehabilitation clients 18 to 26 years old. After a four-week fitness program consisting of endurance and cardiovascular work (i.e., distance running and strength exercises), significant increases between the experimental and control groups were obtained on the self-concept scale and the self-acceptance scale. It was concluded that "the data support the contention that a healthy attitude progresses through the physical sphere" (Collingwood, 1972, p.384).

Not all research, however, supports the hypothesis that physical fitness has a positive effect on self-concept. Teagardin (1983) found no significant difference in elementary, middle, and high school girls' self-concept when comparing subjects with low versus high physical fitness. A review of the literature by Doan and Scherman (1977) identified ten studies in which self-concept was improved through exercise, and nine studies in which self-concept remained the same. All

ages from elementary-school-aged children through adults were equally represented. A more recent review by Scherman (1989) reported on nine studies with no increase in self-concept being achieved through physical activity, while only five studies showed an increase in self-concept due to exercise.

Anxiety, stress reduction and depression. In addition to studying the effects of physical fitness on self-concept, research has been conducted investigating physical activity, depression, anxiety, and stress reduction. Studies have consistently shown that running improves mood, decreases depression, and assists relaxation (Hinkle, Scott & Tuchman, 1988). Other researchers (Seyle, 1974; Young & Ismail, 1976) conclude that only physical fitness and meditative procedures have reduced the negative effects of stress and anxiety. Further, investigations have demonstrated that exercise can have a tranquilizing effect on children and adults (Croce & Lavay, 1985). More specifically, marathon runners and joggers who were active for at least six months revealed anxiety levels lower than inactive individuals (Silvestri, 1987). Croce and Lavay (1985) concluded that 30 minutes of daily jogging

had been more effective in reducing depression than psychotherapy. Silvestri (1987), however, conducted a study with 90 high school girls involving a combination of exercise with relaxation training. The control group did not receive physical exercise or relaxation training, while treatment groups were exposed to combinations of both exercise and relaxation techniques. There was no significant difference in anxiety levels between the control and treatment groups.

Research by Ismail and Trachtman (1973) involved sedentary adult males exposed to a four-month exercise regime, the core of which was progressive, supervised running. They found that during the running program, the men became more relaxed, open, stable, and confident.

Finally, Berger, Friedmann, and Eaton (1988) investigated the effects of jogging and the Relaxation Response (p. 431) on short-term stress reduction of college students. When compared with the control group, the treatment groups exposed to the jogging program and the Relaxation Response showed a greater decrease in short-term stress. The treatment group participating in jogging alone showed higher scores in vigor and lower scores in depression than other treatment groups.

Doan and Scherman's (1977) review of the literature found 12 studies in which exercise helped lessen anxiety and depression. All studies used adult populations. In only one study did anxiety and depression remain the same.

Behavioral Effects

Although there is little evidence documenting a clear relationship between behavior and exercise, the data is growing. According to psychiatrist William Glasser (1976), exercise is addictive; thus, it may replace undesirable addictive behaviors. Carlson (1982) cites the following research findings that link exercise and behavior: improved self-confidence and assertiveness; generalizing the discipline necessary for exercise to other areas of one's life; and working and acting with increased energy levels.

Attention span. Overall, physical fitness seems to affect behavior in a positive way (Silvestri, 1987). Bass (1985) found running to reduce hyperactivity and increase attention span for learning-disabled children on running versus non-running days. Another study in which students ran on a daily basis as part of a school-wide program, helped confirm the positive

behavioral effects of exercise, such as an increase in attention and a decrease in disruptive behaviors as measured and observed by teachers and staff (Bradfield, Cannon, Parker, & Lualhate, 1989). A study of 9-to-10-year-old hyperactive boys concluded that jogging helped to decrease teacher-rated hyperactivity, increase auditory attention, and significantly decrease self-reported depression (Elsom, 1980).

Locus of control. Another area of inquiry relating to exercise and behavior centers around locus of control. Locus of control refers to the "belief in one's own capacity to control reinforcements" (Duke, Johnson, & Nowicki, 1977, p.280). Internally controlled people perceive themselves as being in control of what happens, while externally controlled individuals feel that luck, fate, or chance, determine what happens to them. Duke, Johnson, and Nowicki (1977) found children ages 6 to 14 had a stronger internal locus of control as a result of participating in an eight-week sports fitness camp, as measured by the Children's Nowicki-Strickland Internal-External Control Scale. The literature review conducted by Doan and Scherman (1987) cited two studies with elementary school children, and one with college students,

in which an increase in internal locus of control was achieved through physical activity. There were no studies cited in which internal locus of control did not increase as a result of exercise.

Conclusions

Excluding the two literature reviews, 13 of the 18 studies in a review of the literature found exercise had a positive effect on self-concept, attention span, locus of control, depression and/or anxiety. Depression, anxiety, and attention span were found to improve through physical activity in all of the reviewed research. Seven studies involving self-concept as a variable and its relation to physical exercise were found to have a positive correlation, while two did not. Exercise was shown to have a positive effect on internal locus of control in all the research reviewed. Slightly different conclusions were drawn from two literature reviews.

Doan and Scherman (1987) concluded from their review that "the literature suggests the potential efficacy of physical fitness regimens in the treatment of various personality disorders" (Doan & Scherman, 1987, p.32). To summarize their findings, 66% of the

studies indicated a significant improvement on the dependent psychological measure, 12% showed partial improvement, and 22% resulted in personality variables remaining the same. The authors caution that these data are supportive of a "general trend", but are not sufficient to infer a definite conclusion.

Another review of the literature, also conducted by Scherman (1989), focuses on studies involving physical fitness as a means of intervention with children. The review revealed that physical fitness may be effective in improving self-esteem. Recent studies have indicated that participants involved in physical activity, particularly in non-school settings, have made clear gains in self-esteem (Scherman, 1989).

Discussion

Putting aside any limitations of the reviewed research, the compilation of results suggests that physical exercise may have a positive effect on certain personality characteristics. Attention must be made, however, to the difficulty of empirically measuring personality constructs such as self-concept, locus of control, attention span, depression, and anxiety. Ismail and Trachtman (1973) pointed out the difficulty

in determining whether or not noted personality characteristics are a consequent of or antecedent to physical activity. In other words, are the personalities of athletes, for example, a direct result of their condition, or is the personality responsible for their participation in athletics? Hence, readers should use caution when interpreting results because of the abstract nature of the constructs being measured.

Another difficulty in studying the relationship between certain personality characteristics and exercise is isolating the dependent variables. For example, does self-concept improve due to physical fitness, or does it improve as a result of other intervening variables, such as increased socialization, or a more positive body image? Thus, results should be considered tentatively due to the inter-relationship among variables.

Regardless of obstacles encountered in the study of personality characteristics in relation to physical exercise, the cumulative effects of the studies can still be considered. All intervening variables such as socialization, self-concept, locus of control, attention span, depression and anxiety, have been examined in other research so that a compilation of results now

exists. The vast amounts of research suggest a definite relationship between physical fitness and self-concept, attention span, locus of control, anxiety and depression.

Implications for Counselors

Each of us is in charge of his or her own state of being. We each have the ability to be alive and well. We have the ability to learn new behaviors that facilitate the effective handling of problems and the fulfillment of wants and needs (Pion & Quadri, 1979). Enough information is already available to suggest the usefulness of exploring applications of exercise to a variety of physical and emotional dysfunctions. Those who have experienced the satisfaction of physical excellence as a way of life believe that some of the physical disciplines can be of measurable aid to the well-being of those they serve (Carlson & Ardell, 1981).

As practitioners and researchers, we could devote more attention to the potentials of self-actualization that Maslow, Adler, Horney, Rogers and others began to describe (Carlson & Ardell, 1981). An underlying assumption of these theories is that physical, emotional, intellectual, and spiritual growth are interrelated. As practitioners, then, counselors need to be able to

utilize a variety of approaches to help each individual reach his or her "wellness life-style" (Carlson, 1979, p.89). Such a pathway to wellness is addressed through the physical domain.

The physical dimension lends itself easily as a therapeutic intervention for several reasons. First, the physical domain is concrete. Changes are simple to follow and easy to measure. For example, suggesting a thirty-minute walk is more tangible than "find a support system" or "don't get upset" (Carlson & Ardell, 1981, p.4). Children, too, would respond more readily to a fifteen-minute run around the playground, over the abstract suggestion of "make a new friend" or "learn to control yourself." Another benefit of intervening through the physical domain is that physical exercise is socially acceptable and does not imply "having a problem." Counselors, then, usually meet with less resistance than when using regular therapeutic procedures.

Researchers have found that the ability to establish and attain realistic goals tends to generalize to other areas of the client's life (Carlson & Ardell, 1981). Hence, successful action through the physical domain can provide the impetus for growth and change

in other areas.

Some basic guidelines should be followed for implementing interventions within the physical realm. First, to work with people who wish to choose new behaviors, one should begin by having them evaluate the degree of health they currently experience. Ask those people to assess the degree of satisfaction and success they wish to realize. The emphasis should be on health and positive wellness, and the client's ability to choose to be alive and well (Carlson & Ardell, 1981). Next, specific components of overall health should be identified and the client's understanding of the value of physical fitness to total well-being should be evaluated. Counselors are in a position to help clients become aware of how minds and bodies are "connected in the most intricate ways imaginable, each contributing to their state of health" (Pion & Quadri, 1979, p.100). Finally, it is critical to focus on experiencing the activity rather than achievement. It is not important, for example, that clients run five miles continuously. What is important is that they take that first small step, which then gives them a feeling of accomplishment and self-satisfaction.

Initially, counselors need to make the entire concept of implementing physical activity as attractive as possible (Carlson & Ardell, 1981). Along with this, clients will need a strong support system. Ways to provide support include helping clients identify which physical activity is most compatible with their personalities, lifestyles, and current levels of fitness. Some examples of lifelong aerobic sports are running, walking, swimming, cross-country skiing, aerobic dancing, skiing, tennis, biking, jump roping, and racquetball. Counselors can offer support by helping clients locate resources within the community that provide certain activities, or help connect them with others who may want a fitness partner. Finally, counselors can offer support through encouragement. Focus should be on the positive measures taken, the sense of accomplishment gained, and the overall experience and feelings of well-being.

Aside from having clients pursue physical fitness independently, it can be incorporated directly into the therapeutic process. Some practitioners (Blount, 1989; Rodale, 1989; Carlson & Ardell, 1981) have been successful, using a program of running with group therapy

and/or journal writing. These techniques have been successful in part due to the "altered state" produced by running, also known as the "runner's high" (Sheehan, 1988, p.13). The runner's high is "a state of extreme calm, centeredness; a oneness with the universe" (Sheehan, 1988, p.14), so that clients are in a state of reduced tension and relaxation induced by the physical activity. Brown (cited in Hinkle, Scott, & Tuckman, 1988), explained it well: "As the body becomes more relaxed, the mind becomes less focused. During this heightened state, the mind frees itself from a preoccupation with mental stress and reaches out into more fertile pathways" (p. 11). In this relaxed state, clients are freer to learn, risk, and experience therapeutic growth.

A critical component, not to be overlooked when utilizing fitness as part of the therapeutic process, is the power of modeling. Without modeling, what effect do counselors really have on their clients? They must believe in a healthy way of life enough to personally practice a physical fitness regime. Further, counselors who have incorporated physical activity into their lifestyles and attempt to integrate the physical disciplines into their work with clients, could illustrate that Freud was a great walker and Jung practiced yoga,

both using these physical outlets to help counterbalance the intellectual sides of their lives (Carlson & Ardell, 1981). As counselors, then, we need to model a commitment to our own best potentials, which often begins with the physical disciplines. We need to demonstrate wellness as "a joyous activity which denotes living life in all of its aspects to the fullest extent possible" (Carlson, 1979, p.88).

In addition to incorporating the physical realm into the therapeutic process, further research is needed. It seems likely that the direction for future investigations would be to study the strength of the relationship between physical fitness and personality characteristics (i.e., are other variables actually the underlying cause of the perceived correlations) and the direction of the relationship; whether physical fitness is the antecedent or consequent of these other factors. At this point, however, the cumulative effects of current research can be considered, which in this case suggests an intricate relationship (but nonetheless a relationship) between physical exercise and various personality characteristics.

Human beings are made up of body, mind and spirit. As ancient philosophers have known, and as the literature

indicates, there is a connection between our physical and mental selves. We are a delicate balance of interrelated systems, so that an imbalance in one system affects all others. Conversely, harmony among all systems fosters health. Health is more than the absence of disease; it is a positive condition that provides "energy, enthusiasm, and an inner glow" (Dinkmeyer & Dinkmeyer, 1979, p.106).

Counselors and others in the helping professions would do well to place less emphasis on clients' problems, and more emphasis on ways in which individuals can help themselves, discovering that they are the source of their own wellness. The physical dimension can be used as a stepping stone for growth and change, leading to a life-style of total well-being.

Last, for those who argue that physical fitness requires too much effort, preferring instead a sedentary lifestyle, a cosmic law comes to mind: "for energy to be created, energy must be expended" (Carlson, 1979, p.86). To receive enthusiasm, lust for life, peace of spirit, and inner glow, one must give personal energy. But the "giving need not be arduous. It can be a joyous, harmonious integration of body, mind,

and spirit, tapping into unused resources, creating new energies. Perhaps difficult to comprehend, but nevertheless true, energy creates energy; it is the way of the universe.

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